

What is claimed is:

1. Precipitated silica having the following physico-chemical properties:
- | | |
|-------------------------------------|-----------------------------|
| BET surface area | 35 to 350 m ² /g |
| 5 BET/CTAB surface area ratio | 0.8 to 1.1 |
| Pore volume, PV | 1.6 to 3.4 ml/g |
| Silanol group density ($V_2 =$ ml) | 6 to 20 ml |
| NaOH consumption) | |
| Average aggregate size | 250 to 1500 nm |
| 10 CTAB surface area | 30 to 350 m ² /g |
| DBP value | 150 to 300 ml/100 g |
| V_2/V_1 by Hg porosimetry | 0.19 to 0.46 |
| DBP/CTAB | 1.2 3.5 to 3.9. |

2. A process for the production of the precipitated silica with the following physicochemical parameters:

- | | |
|-------------------------------------|-----------------------------|
| BET surface area | 35 to 350 m ² /g |
| BET/CTAB surface area ratio | 0.8 to 1.1 |
| Pore volume, PV | 1.6 to 3.4 ml/g |
| Silanol group density ($V_2 =$ ml) | 6 to 20 ml |
| 20 NaOH consumption) | |
| Average aggregate size | 250 to 1500 nm |
| CTAB surface area | 30 to 350 m ² /g |
| DBP value | 150 to 300 ml/100 g |
| V_2/V_1 by Hg porosimetry | 0.19 to 0.46 |
| 25 DBP/CTAB | 1.2 to 2.4 |

said process comprising reacting an alkali silicate with a mineral acid at a temperature in the range 60 to 95°C while maintaining a pH of 7.5 to 10.5 and continuously stirring, continuing the reaction to a solids concentration in the precipitation suspension of 90 to 120 g/l, adjusting the pH value to less than or equal to 5, filtering out the precipitated silica, washing and drying.

3. A process as set forth in claim 2 including the step of grinding the dried silica.
4. A process as set forth in claim 2 including the step of granulating the dried silica
- 5 5. A vulcanizable rubber compound comprising a vulcanizable rubber and a precipitated silica having the following physico chemical properties:
- | | |
|--|-----------------------------|
| BET surface area | 35 to 350 m ² /g |
| BET/CTAB surface area ratio | 0.8 to 1.1 |
| 10 Pore volume, PV | 1.6 to 3.4 ml/g |
| Silanol group density (V2 = | 6 to 20 ml |
| NaOH consumption) | |
| Average aggregate size | 250 to 1500 nm |
| CTAB surface area | 30 to 350 m ² /g |
| 15 DBP value | 150 to 300 ml/100 g |
| V ₂ /V ₁ by Hg porosimetry | 0.19 to 0.46 |
| DBP/CTAB | 1.2 to 2.4. |
6. A vulcanizate comprising a vulcanized rubber and a precipitated silica having the following physico chemical
- 20 properties:
- | | |
|--|-----------------------------|
| BET surface area | 35 to 350 m ² /g |
| BET/CTAB surface area ratio | 0.8 to 1.1 |
| Pore volume, PV | 1.6 to 3.4 ml/g |
| Silanol group density (V2 = | 6 to 20 ml |
| 25 NaOH consumption) | |
| Average aggregate size | 250 to 1500 nm |
| CTAB surface area | 30 to 350 m ² /g |
| DBP value | 150 to 300 ml/100 g |
| V ₂ /V ₁ by Hg porosimetry | 0.19 to 0.46 |
| 30 DBP/CTAB | 1.2 to 2.4 |

add at

Add F1

Add G1

Add H1

Add F1